

**Industrial Area
Sampling and Analysis Plan
Fiscal Year 2002
Addendum #IA-02-02**



January 2002

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Approval received from the Colorado Department of Public Health and Environment and
the U. S. Environmental Protection Agency

Approval letter contained in the Administrative Record

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ACRONYMS

As	arsenic
Be	beryllium
Cd	cadmium
Cr	chromium
Cu	copper
Fe	iron
FY	Fiscal Year
Hg	mercury
HPGe	high-purity germanium
HRR	Historical Release Report
IA	Industrial Area
IASAP	Industrial Area Sampling and Analysis Plan
IHSS	Individual Hazardous Substance Site
mg/kg	milligrams per kilograms
Mn	manganese
Mo	molybdenum
Ni	nickel
NO ₂	nitrite
NO ₃	nitrate
PAC	Potential Area of Concern
Pb	lead
pCi/g	picocuries per gram
PCOC	potential contaminant of concern
SAP	Sampling and Analysis Plan
Se	selenium
Sr	strontium
SVOC	semivolatile organic compound
UBC	Under Building Contamination
µg/kg	micrograms per kilogram
V	vanadium
Zn	zinc

1.0 INTRODUCTION

This Industrial Area (IA) Sampling and Analysis Plan (SAP) (IASAP) (DOE 2001a) Addendum #IA-02-02 includes IA Group-specific information, sampling locations, and potential contaminants of concern (PCOCs) for Individual Hazardous Substance Sites (IHSSs), Potential Areas of Concern (PACs), and Under Building Contamination (UBC) Sites proposed for characterization during Fiscal Year (FY)02. This IASAP Addendum is a supplement to the IASAP (DOE 2001a). IASAP Addendum #IA-02-02 includes sampling and analysis requirements for IHSS Group 900-4&5 (900 Area). The location of this IHSS Group is shown on Figure 1.

2.0 EXISTING CHARACTERIZATION INFORMATION

Existing data for the IHSSs, PACs, and UBC Sites are available in Appendix C to the IASAP (DOE 2001). Existing concentrations and activities above the background mean plus two standard deviations or method detection limits are shown on maps in Section 5.0, where available. Table 1 presents the PCOCs.

3.0 SAMPLING

The proposed sampling specifications (number and type of samples) for each IHSS, PAC, and UBC Site are listed in Table 2. Proposed new sampling locations are the starting point for IA Group characterization. After characterization starts, the number and type of samples may change based on sampling results. Changes to sampling specifications will be considered in consultation with the regulatory agencies.

Three types of sampling strategies are used to determine sampling locations: statistical, geostatistical, and biased. Statistical grids have computer-generated random start points and orientations. Additionally, the grids have been extended outside the IHSS, PAC, or UBC Site to provide additional sampling locations if needed. Biased samples are based on existing data and geostatistical analysis was used where possible.

Where a new sampling location overlaps or is adjacent to an existing sampling location, the existing sampling location data will be used during evaluation.

If remediation is required at this IHSS Group, in-process sampling will be conducted in accordance with Section 4.1 of the IASAP (DOE 2001). When remediation is complete, confirmation sampling locations will be determined and samples will be collected in accordance with Section 4.5 of the IASAP (DOE 2001).

4.0 MAPS

Maps in this section are organized by IA Group and IHSS. All existing sampling locations and existing data, where available, are presented, followed by the proposed new sampling locations.

5.0 REFERENCES

- DOE, 1992, Phase I RFI/RI Work Plan Rocky Flats Plant Other Outside Closures, Operable Unit 10, Rocky Flats Plant, Golden, Colorado, May.
- DOE, 1992 – 2000, Historical Release Report for the Rocky Flats Plant, Golden, Colorado.
- DOE, 2000, Rocky Flats Environmental Technology Site Industrial Area Data Summary Report, Golden, Colorado, September.
- DOE, 2001, Industrial Area Sampling and Analysis Plan, Rocky Flats Environmental Technology Site, Golden, Colorado, June.

Table 1
Potential Contaminants of Concern

IA Group	IHSS/PAC/UBC Site	PCOCs	Media	Data Source	Sampling Location Method
900-4&5	900-175 – S&W Building 980 Contractor Storage Facility	Metals (As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Hg, Mo, Ni, Se, Sr, V, Zn) Inorganics (NO ₃ , NO ₂) SVOCs Radionuclides	Surface Soil	Historical Release Report (HRR) (DOE 1992 - 2000) IA Data Summary Report (DOE 2000) OU 10 Work Plan (DOE 1992)	Statistical Grid

As	arsenic
Be	beryllium
Cd	cadmium
Cr	chromium
Cu	copper
Fe	iron
Hg	mercury
Mn	manganese
Mo	molybdenum
Ni	nickel
NO ₂	nitrite
NO ₃	nitrate
Pb	lead
Se	selenium
Sr	strontium
SVOC	semi-volatile organic compound
Zn	zinc

Table 2
Sampling Specifications

IA Group	IHSS/PAC/UBC Site	No. of Samples	Media	Depth Interval	Analyte	Method	Duplicates	Rinsates	Field Blanks (VOCs only)	Trip Blanks (VOCs only)
900-4&5	900-175 – S&W Building 980 Contractor Storage Facility	6	Surface Soil	0-0.5'	SVOCs	8270C	≥ 5%	≥ 5%		
		6	Surface Soil	0-0.5'	Metals	6200	≥ 5%	≥ 5%		
		6	Surface Soil	0-0.5'	Radionuclides	HPGe	≥ 5%	≥ 5%		
		6	Surface Soil	0-0.5'	NO ₂ /NO ₃	9056	≥ 5%	≥ 5%		

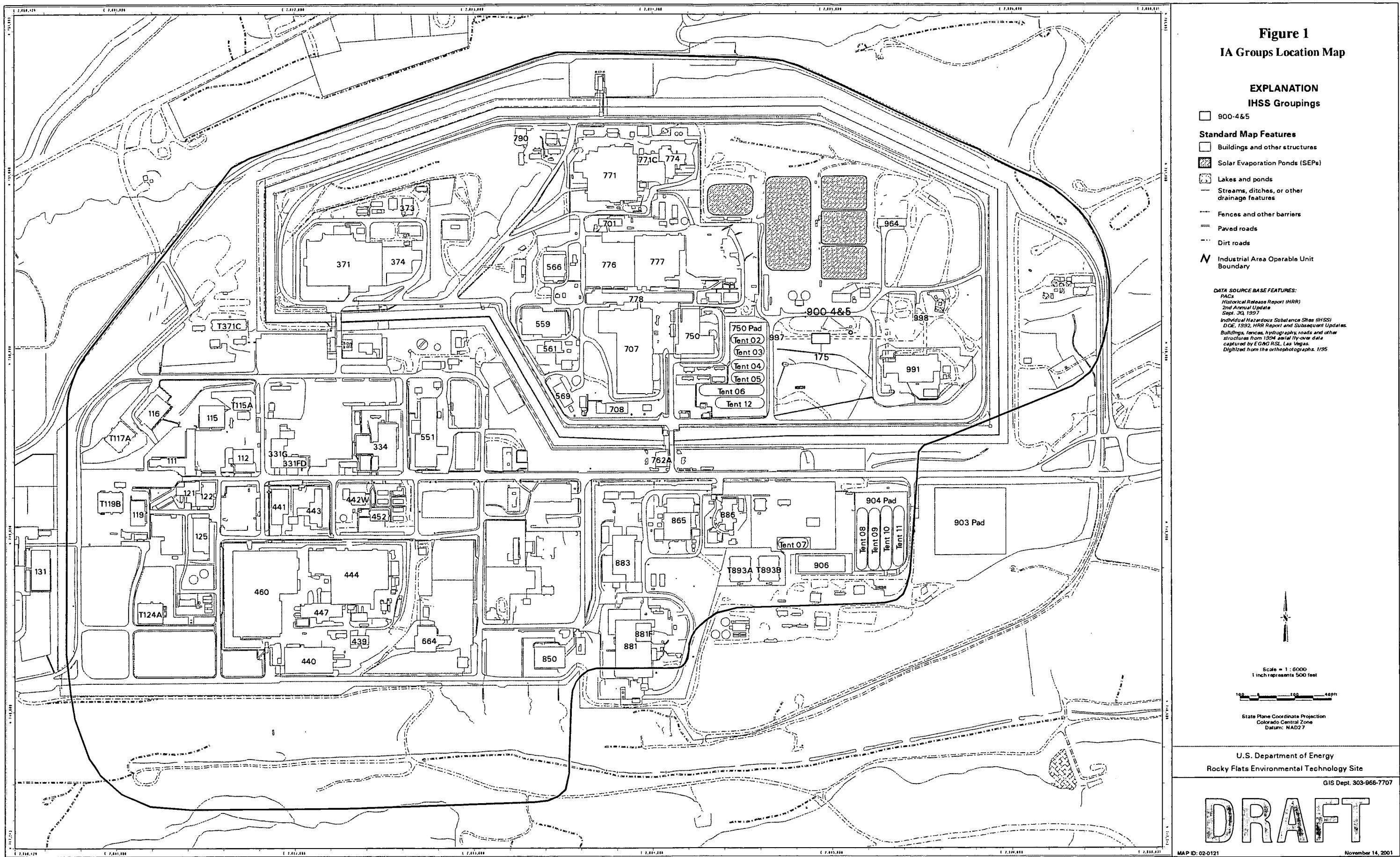
HPGe high-purity germanium
 VOC volatile organic compound

IA Group 900-4&5 Maps

Location of Existing Sample Results Above Detection Limits or Background Levels for
IA Group 900-4&5 (900-175 and 900-1308)

FY2002 Sampling Locations for IA Group 900-4&5 (900-175)

Figure 1
IA Groups Location Map



**FY 2002 Sampling Locations
for IA Group 900 - 4&5
(900-175 and 900-1308)**

KEY

- FY 2002 geostatistical sampling location
- FY 2002 biased sampling location
- FY 2002 statistical sampling location
- Random start 36-ft triangular grid line
- FY 2002 IHSS location
- FY 2002 PAC location
- FY 2002 UBC location
- Building/structure
- Paved area
- /— Dirt road
- /— Stream, ditch, or other drainage feature
- Existing soil sampling locations (50-ft buffer)
 - Both subsurface and surface soil
 - △ Subsurface soil
 - Surface soil

N

Scale = 1:300

10 0 10 20 30 40 Feet
State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by:



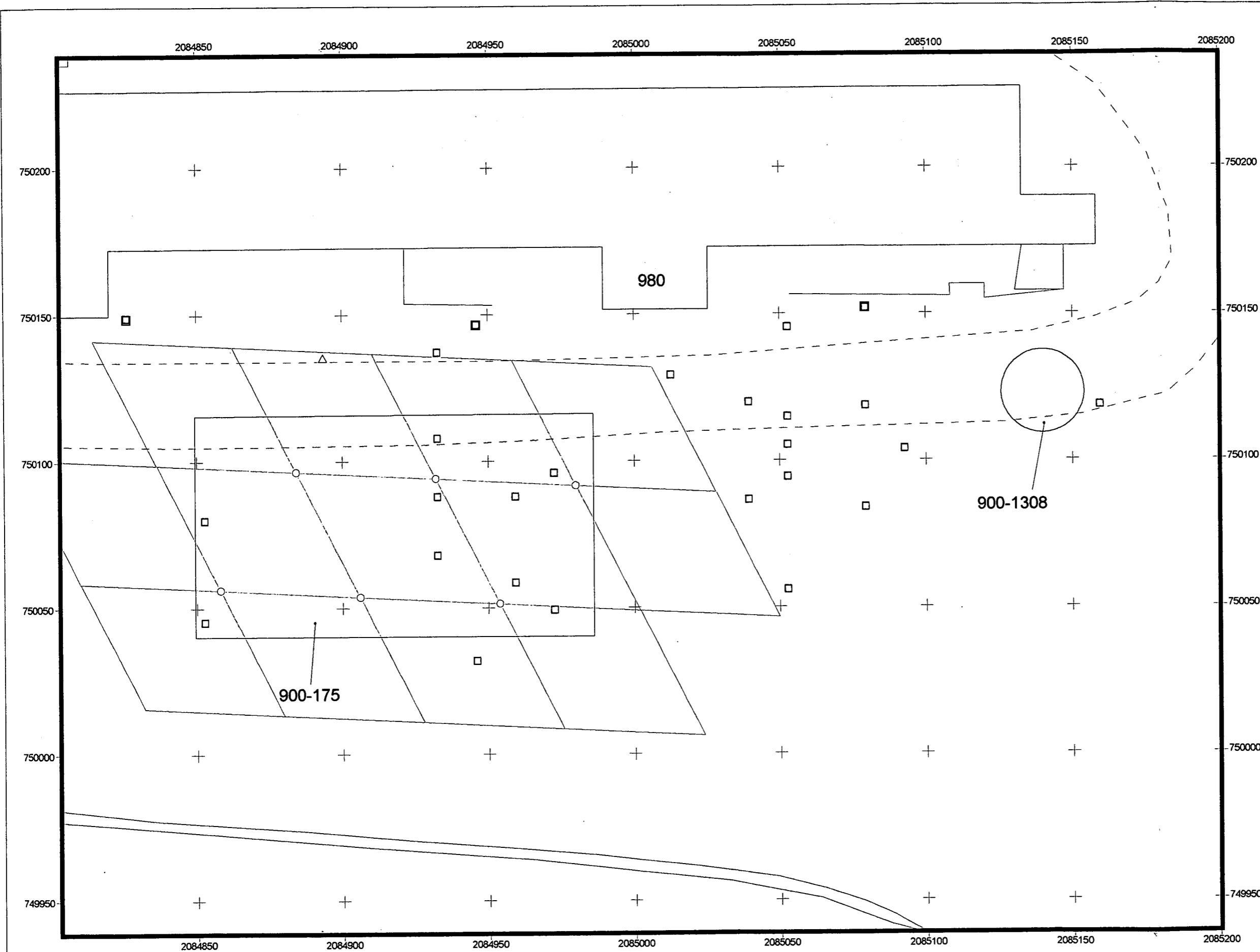
Prepared for:



statgrid.apr

9 October 2001

12/12



Location of Existing Sample
Results Above Detection Limits or
Background Levels for IA
Group 900-4&5 (I900-175
and 900-1308)

KEY

- FY 2002 IHSS location
- FY 2002 PAC location
- FY 2002 UBC location
- Building/structure
- Paved area
- Dirt road
- Stream, ditch, or other drainage feature

Existing soil sampling locations

- Both subsurface and surface soil
- ▲ Subsurface soil
- Surface soil

N

Scale = 1:150

10 0 10 20 Feet
State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

U.S. Department of Energy
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